said power [control] controller [means] converting said AC electrical power to produce converted DC electrical power;

a [battery means] rechargeable DC power source providing on a standby basis said required DC electrical power [through] to said power [control means]controller;

said power controller including a regulator receiving the voltage and the converted DC electrical power, said controller providing voltage regulated DC power;

said [battery means]rechargeable DC power source being connected to said power [control] controller [means] for being maintained in a fully charged condition by said power [control] controller [means] during normal supply of AC electrical power from said grid source; and

said power [control] controller [means] delivering [said required] voltage regulated DC electrical power from said [battery means] rechargeable DC power source to said lighting fixtures only during an AC electrical power outage to maintain without interruption normal lighting by said lighting fixtures.

2. (Amended) The high efficiency lighting system of Claim 1 further comprising multiple power [control means] controllers each connected to respective [battery means] rechargeable DC power sources for maintaining lighting fixtures in a building with multiple rooms.

7. (unchanged) The high efficiency lighting system as in Claim 1, further comprising a DC power cogenerator directly coupled to said lighting fixtures through a diode

isolator allowing either AC or DC power to operate said lighting fixtures.

9. (Twice Amended) A DC power supply system for DC loads requiring DC electrical power comprising:

a plurality of DC loads distributed throughout a building, each of said loads requiring DC electrical power for operations;

a power [control means for] controller receiving AC electrical power from a grid source and delivering [required] voltage regulated DC electrical power to said DC loads;

said power [control] controller [means] converting said AC electrical power to voltage regulated DC electrical power;

a [battery means for] rechargeable DC power source providing on a standby basis said required voltage regulated DC electrical power through said power [control] controller [means];

said [battery means] rechargeable DC power source being connected to said voltage regulating power [control] controller [means for] and being maintained in a fully charged condition by said power [control] controller [means] during normal supply of AC electrical power from said grid source; [and]

said power [control] controller [means] delivering [said required] voltage regulated DC electrical power from said [battery means] rechargeable DC power source to said DC

loads during an AC electrical power outage to maintain without interruption normal operation of the DC loads, and

said power [control] controller [means] also delivering said required DC electrical power from said [battery means] rechargeable DC power source to said loads through a voltage change of said power [control] controller [means].

11. (Twice Amended) The DC power supply system of Claim 1 having a cogeneration source of DC electrical power connected to said power [control means] controller for reducing the amount of voltage regulated power taken from said grid source.

13. (Twice Amended) A DC power supply system for DC loads requiring DC electrical power from a first DC power source and delivering required DC electrical power to said DC load;

[said] a power [control] controller [means] controlling charging of a [battery means] rechargeable second DC power source;

said [battery means] rechargeable second DC power source providing on a standby basis [said] required voltage regulated DC electrical power through said power [control] controller [means];

said power controller including a regulator receiving the voltage and the DC electrical power from said first DC power source, said controller providing voltage regulated DC electrical power;

said [battery means] rechargeable second DC power source being connected to said voltage regulating power

[control] controller [means] for being maintained in a charged condition by said power [control] controller [means during hours of] when input is available from said first DC power source, and

said power [control] controller [means] delivering said required DC electrical power from said [battery means] rechargeable second DC power source to said DC load during periods of time when a predetermined amount of said power from said first DC power supply is not available.

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14. (unchanged) The DC power supply system as in Claim 13 wherein said DC power source is a cogeneration unit.

15. (unchanged) The DC power supply system as in Claim 13 wherein said DC power source is a photovoltaic panel.

16. (unchanged) The DC power supply system as in Claim 9 wherein said DC load is a household appliance.

19. (unchanged) The DC power supply system as in Claim 13 wherein said DC load is a household appliance.

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22. (Once Amended) A high efficiency lighting system comprising:

a plurality of lighting fixtures distributed throughout a building, each of said fixtures requiring DC electrical power for operation,

a voltage regulating power [control] controller [means] in a single location [for] receiving AC electrical power from a grid source and converting said AC electrical power to [a] voltage regulated DC electrical power, and means for distributing said DC electrical power to said lighting

fixtures thereby obviating the need for converting AC to DC power at each of said lighting fixtures.

23. (Amended) The lighting system of Claim 22 having a [battery means for] rechargeable DC power source providing on a standby basis said required DC [low voltage] electrical power to said power [control] controller [means], during an AC electrical outage to maintain without interruption normal lighting by said lighting fixtures,

said [battery means] rechargeable DC power source being connected to said power [control] controller [means] for being maintained in a fully charged condition by said power controller [means] during normal supply of AC electrical power from said grid source, and supplying DC electrical power to said lighting fixtures when there is an AC power outage.

24. (Once Amended) A high efficiency lighting system utilizing AC electrical power from a grid source for maintaining normal lighting conditions by lighting fixtures requiring DC electrical power comprising:

a voltage regulating power [control] controller [means for] receiving AC electrical power from a grid source and delivering required low voltage DC electrical power to said lighting fixtures;

said power [control] controller [means] converting said AC electrical power to voltage regulated DC electrical power;

a [battery means for] rechargeable DC power source providing on a standby basis said required DC electrical

power through said power [control] controller [means] when said AC electrical power reaches a predetermined threshold limit;

said [battery means] rechargeable DC power source being connected to said power [control] controller [means] for being maintained in a fully charged condition by said power controller [means] during normal supply of AC electrical power from said grid source; and

said voltage regulating power [control] controller [means] limiting said converted AC electrical power to DC electrical power when load requirements exceed said predetermined [the] threshold limit, wherein said [battery means] rechargeable DC power source provides any additional required DC electrical power.

28. (Once Amended) A high efficiency lighting system for maintaining normal lighting conditions by lighting fixtures requiring DC electrical power comprising:

a power [control means] controller for receiving DC electrical power from a photovoltaic panel and delivering required DC electrical power to said lighting fixtures;

said power [control means] controller controlling charging of a [battery means] rechargeable DC power source;

said [battery means] rechargeable DC power source providing on a standby basis said required DC electrical power through said power [control means] controller;

said power controller including a regulator receiving the voltage and the DC electrical power, said controller providing voltage regulated DC power;

said [battery means] rechargeable DC power source being connected to said power [control means] controller for being maintained in a charged condition by said power control means during hours of input from said photovoltaic panel, and

said power [control means] controller delivering said required DC electrical power from said [battery means] rechargeable DC power source to said lighting fixtures during periods of time when power from said photovoltaic panel is not available.

30. (Once Amended) A DC power supply system for DC loads requiring DC electrical power comprising:

a power [control means] controller [for] receiving DC electrical power from a stand alone DC power source not connected to a grid supplied AC electrical power source and delivering required DC electrical power to said DC load;

said power [control means] controller controlling charging of a [battery means] rechargeable DC power source;

said [battery means] rechargeable DC power source providing on a standby basis said required DC electrical power through said power [control means] controller;

said power controller including a regulator receiving the voltage and the DC electrical power, said controller providing voltage regulated DC power;

said [battery means] rechargeable DC power source being connected to said power [control means] controller for being maintained in a fully charged condition by said power

[control means] controller during hours of input from said DC power source, and

said power [control means] controller delivering said required DC electrical power from said [battery means] rechargeable DC power source to said DC load during periods of time when power from said DC power supply is not available.

31. (unchanged) The DC power supply system as in Claim 13 wherein said DC power source is a photovoltaic panel.

32. (unchanged) The DC power supply system as in Claim 9 wherein said DC load is a household appliance.

33. (unchanged) The DC power supply system as in Claim 30 wherein said DC load is a household appliance.

36. (Once Amended) A high efficiency lighting system utilizing AC electrical power from a grid source for maintaining normal lighting conditions by lighting fixtures requiring DC electrical power comprising:

a power [control means] controller for receiving AC electrical power [from a grid source] and delivering required DC electrical power to said lighting fixtures;

said power [control means] controller converting said AC electrical power to produce converted DC electrical power;

a [battery means] rechargeable DC power source for providing on a standby basis said required DC electrical power [through] to said power [control means] controller;

said power controller including a regulator receiving the voltage and the DC electrical power, said controller providing voltage regulated DC power;

said [battery means] rechargeable DC power source being connected to said power [control means] controller for being maintained in a fully charged condition by said power [control means] controller during normal supply of AC electrical power from said grid source; and

said power [control means] controller delivering said required voltage regulated DC electrical power from said [battery means] rechargeable DC power source to said lighting fixtures through a voltage change of said voltage regulating power [control means] controller.

Please add new Claims 37 -48 as follows:

37. A high efficiency lighting system for maintaining normal lighting conditions by lighting fixtures requiring DC electrical power comprising:

a power controller receiving AC electrical power from a grid source and delivering required DC electrical power to said lighting fixtures, said power controller converting said AC electrical power to DC electrical power;

a rechargeable DC power source providing on a standby basis said required DC electrical power through said power controller;

said DC power source being connected to said power controller and being maintained in a fully charged condition by said power controller during normal supply of AC electrical power from said grid source;

said power controller delivering said required DC electrical power from said DC power source to said lighting fixtures during an AC electrical power outage to maintain without interruption normal lighting by said lighting fixtures; and

a photovoltaic source of DC electrical power connected to said power controller, said photovoltaic source reducing the amount of AC electrical power taken from said grid source.

38. The lighting system of claim 37 wherein said photovoltaic source is constructed to reduce the amount of AC electrical power taken from said grid source when said AC electrical power reaches a predetermined limit.

39. A high efficiency lighting system for lighting fixtures requiring DC electrical power comprising:

a power controller receiving AC electrical power from a grid source and delivering required DC electrical power to said lighting fixtures, said power controller converting said AC electrical power to DC electrical power;

a photovoltaic source of DC electrical power delivering DC electrical power through said power controller;

said power controller reducing the electrical power taken from said grid source by the amount of electrical power supplied by said photovoltaic source.

40. A high efficiency lighting system in accordance with claim 39, further comprising a rechargeable DC power source providing on a standby basis said required DC electrical power to said power controller, said power

controller maintaining said DC power source in fully charged condition by electrical power from said grid source.

41. A high efficiency lighting system in accordance with claim 40, wherein said power controller is constructed to utilize power from said DC power source to maintain without interruption the normal lighting by said lighting fixtures during a power outage.

42. A DC power supply system for DC loads requiring DC electrical power, comprising:

a power controller receiving AC electrical power from a grid source and delivering required DC electrical power to said lighting fixtures, said power controller converting said AC electrical power to DC electrical power;

a rechargeable DC power source providing on a standby basis said required DC electrical power through said power controller;

said DC power source being connected to said power controller and being maintained in a fully charged condition by said power controller during normal supply of AC electrical power from said grid source;

said power controller delivering said required DC electrical power from said DC power source to said lighting fixtures during an AC electrical power outage to maintain without interruption normal operation of the DC load; and

a photovoltaic source of DC electrical power connected to said power controller, said photovoltaic source reducing the amount of AC electrical power taken from said grid source.

43. A high efficiency lighting system for maintaining normal lighting conditions by lighting fixtures requiring DC electrical power comprising:

a power controller receiving AC electrical power from a grid source and delivering required DC electrical power to at least one DC load, said power controller converting said AC electrical power to DC electrical power;

a rechargeable DC power source providing on a standby basis said required DC electrical power through said power controller;

said DC power source being connected to said power controller and being maintained in a fully charged condition by said power controller during normal supply of AC electrical power from said grid source;

said power controller limiting the amount of AC electrical power converted to DC electrical power when said AC electrical power reaches a predetermined limit; said DC power source providing any deficit in required DC electrical power; and

said power controller interconnecting a first DC power supply, a second DC power supply and said at least one load, for operation in three modes;

a first mode in which said first DC power supply provides all of the power for said at least one load;

a second mode in which said first DC power supply and said second DC power supply share power to said at least one DC load; and,

a third, a mode in which said second DC power supply provides all the power for said at least one DC load means.

44. A high efficiency lighting system as in claim 43 wherein said at least one DC load is a fluorescent lighting load and said DC power supplies are in the form of one of a storage battery and a photovoltaic panel.

45. The high efficiency lighting system as in Claim 1 wherein said rechargeable DC power source is a storage battery.

46. The high efficiency lighting system as in Claim 1 wherein said rechargeable DC power source is a photovoltaic source of DC electrical power.

47. A high efficiency lighting system for maintaining normal lighting conditions by lighting fixtures requiring DC electrical power comprising:

a power controller receiving DC electrical power from a first DC power source and delivering required DC electrical power to at least one DC load;

a rechargeable second DC power source providing on a standby basis said required DC electrical power through said power controller;

said rechargeable second DC power source being connected to said power controller and being maintained in a fully charged condition by said power controller during normal supply of DC electrical power from said first DC power source;

said power controller limiting the amount of DC electrical power from said first DC power source when said DC electrical power reaches a predetermined rechargeable limit; said rechargeable second DC power source providing any deficit in required DC electrical power; and

said power controller interconnecting said first DC power supply, a second DC power supply and said at least one load, for operation in three modes:

a first mode in which said first DC power supply provides all of the power for said at least one load;

a second mode in which said first DC power supply and said rechargeable second DC power supply share power to said at least one DC load; and,

a third, a mode in which said second DC power supply provides all the power for said at least one DC load means.

48. A high efficiency lighting system as in Claim 47 wherein said at least one DC load is a fluorescent lighting load and said DC power supplies are in the form of one of a storage battery and a photovoltaic panel.